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The Rutgers Turfgrass Proceedings is published yearly by the Rutgers Center for Turfgrass Science, Rutgers Cooperative Extension, and the New Jersey Agricultural Experiment Station, Cook College, Rutgers University in cooperation with the New Jersey Turfgrass Association. The purpose of this document is to provide a forum for the dissemination of information and the exchange of ideas and knowledge. The proceedings provide turfgrass managers, research scientists, extension specialists, and industry personnel with opportunities to communicate with co-workers. It also allows these professionals to reach a more general audience, which includes the public. Articles appearing in these proceedings are divided into two sections.

The first section includes lecture notes of papers presented at the 1996 New Jersey Turfgrass Expo. Publication of the New Jersey Turfgrass Expo Notes provides a readily available source of information covering a wide range of topics. The Expo Notes include technical and popular presentations of importance to the turfgrass industry.

The second section represents performance of turfgrass cultivars and selections in New Jersey turf trials. The primary objective of these papers is to facilitate the timely dissemination of original turfgrass research for use by the turfgrass industry.

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PERFORMANCE OF PERENNIAL RYEGRASS CULTIVARS AND SELECTIONS IN NEW JERSEY TURF TRIALS

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The development of better quality perennial ryegrasses (*Lolium perenne* L.) continues at the New Jersey Agricultural Experiment Station and many other research facilities around the world. The best new perennial ryegrasses have better disease resistance, darker color, and a denser, lower growth habit. Plant breeders are still improving characteristics such as better mowing quality, leaf texture, and a more uniform appearance. The presence of a *Neotyphodium lolii* endophyte in many ryegrasses has also enhanced insect resistance and stress tolerance.

The tables presented in this paper provide current data on trials established at the Plant Science Research Center, Adelphia NJ and The Turfgrass Research Facility, North Brunswick, NJ. Two of the tests (Tables 1 and 2) were evaluated in cooperation with the National Turfgrass Evaluation Program (NTEP).

PROCEDURES

Three perennial ryegrass tests were established in 1994 and 1995. One test was seeded at North Brunswick, NJ in September 1994 (Table 1). Two other trials were seeded at Adelphia, NJ: one in September 1994 (Table 2) and the other in August 1995 (Table 3).

The two Adelphia tests were hand sown with 0.88 oz of seed into 3 X 5 ft plots (3.7 lb seed/1000 ft^2). The North Brunswick test was hand sown with 2.1 oz of seed into 3.5 X 5.5 ft plots (6.8 lb seed/1000 ft^2). A six inch unseeded border surrounded each plot. All tests were arranged in a randomized complete block design with three replications. Management procedures included irrigation as needed to avoid severe drought stress, a fall application of the postemergence herbicides 2,4-D and Dicamba for broadleaf weed control, and a spring application of DCPA or bensulide for preemergence control of summer annuals. In June 1996, Bayleton was applied on the 1994 North Brunswick test to control dollar spot.

The annual rate of nitrogen (N) fertilization and mowing height for each test are presented in Table 4. Single applications of fertilizer did not exceed 1.0 lb N/1000 ft^2. The amount and timing of nitrogen applied to turf was varied to encourage disease and other stresses. Tests were regularly mowed with reel mowers at 1.5 inches. Rotary mowers were occasionally used to remove stems and prostrate leaf blades. Based on soil test results, tests were limed as needed to maintain a pH of 6.0 to 6.5.

All tests were rated at frequent intervals throughout the growing season for turf quality (i.e., attractive appearance, turf color, uniformity, density, clean mowing, reduced rate of vertical

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growth, leaf texture, spring green-up, and insect and disease damage). In addition, the North Brunswick trial (Table 1) was specifically rated for spring green-up, color, leaf texture, and red thread disease; percent *Poa annua* was assessed for the 1994 Adelphia test (Table 2); and turf color was rated for the 1995 Adelphia test (Table 3). All ratings were based on a 1 to 9 scale, with 9 representing the best turf characteristic. Plots were evaluated by a number of turfgrass specialists to reduce the effects of personal preference for particular characteristics. All data were summarized and subjected to an analysis of variance. All data were summarized and subjected to analysis of variance. Means were separated using the least significant difference (LSD) multiple comparisons test.

RESULTS AND DISCUSSION

Results for the three tests are presented in Tables 1 through 3. Entries in these tables are ranked according to the two year quality average. A high quality average is generally indicative of darker green color, greater density, finer leaf texture, lower growth habit, better mowing quality, and less damage due to insect or disease.

The leaf texture rating in Table 1 indicated that newer varieties such as Brightstar II, Calypso II, Palmer III, and Premier II possessed a finer leaf blade than did older varieties such as Linn and Pennfine. Color ratings in Tables 1 and 3 showed that newer varieties, along with promising experimentals, were a darker green than older standard varieties. However, a spring green-up rating in Table 1 indicated that newer ryegrasses were slower to come out of winter dormancy than many of the older cultivars. The percent *Poa annua* rating (less than 10%) in Table 2 indicated that, compared to many other entries, varieties such as Brightstar, Calypso II, J-1706, and Top Hat were more competitive against *Poa annua*.

Although perennial ryegrasses have been considerably improved through breeding efforts, there is still a need to develop varieties that perform better under conditions of low fertility, are more heat and cold hardy, and possess the ability to survive under ice sheets for extended periods. In addition, genetically stable resistance to diseases such as gray leaf spot, crown rust, dollar spot, pink patch, red thread, brown patch, and winter leaf spot is also needed for a more attractive and dependable turf.

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Table 1. Performance of perennial ryegrass cultivars and selections in a turf trial seeded September 1994 at North Brunswick, NJ. (Includes 1994 National Perennial Ryegrass Test - NTEP).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Spring Greenup[2] April 1996 Avg.	Color[3] Oct. 1996	Leaf Texture[4] Nov. 1996	Red Thread[5] May to June 1996
1	Brightstar II	6.7	7.0	6.5	1.8	9.0	8.0	7.2
2	Palmer III	6.6	7.0	6.2	4.0	8.0	7.7	6.5
3	Premier II	6.5	6.5	6.5	5.3	8.7	7.3	6.5
4	Calypso II	6.4	6.7	6.1	5.8	7.3	7.3	6.0
5	Panther	6.4	6.5	6.2	5.3	7.3	7.3	6.8
6	J-1706	6.3	6.7	5.9	4.7	7.0	7.3	5.2
7	Secretariat	6.3	6.8	5.8	4.8	6.3	7.0	5.5
8	Catalina	6.2	6.4	6.0	3.2	8.3	7.0	6.5
9	LRF-94-C8	6.2	6.4	5.8	3.7	8.7	7.0	5.5
10	Prelude III	6.2	6.5	6.0	3.0	9.0	6.7	5.3
11	MB 47	6.2	6.4	5.9	2.8	8.3	7.3	5.5
12	Repell III	6.1	6.4	5.9	2.5	8.7	7.7	5.3
13	Divine	6.1	6.1	6.1	4.8	8.0	7.7	6.5
14	MB 42	6.0	6.4	5.6	2.7	8.7	6.3	5.3
15	Laredo	5.9	6.0	5.8	4.3	6.7	7.0	7.8
16	PST-2DLM	5.9	6.3	5.5	2.5	8.7	6.7	5.8
17	Citation III	5.9	6.2	5.7	4.7	7.3	6.3	6.5
18	Manhattan III	5.9	6.3	5.6	3.3	7.3	7.3	5.0
19	Prizm	5.9	6.1	5.7	4.7	5.3	6.0	7.5
20	Elf	5.8	6.0	5.5	5.2	6.7	6.0	4.8

Table 1 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Spring Greenup[2] April 1996 Avg.	Color[3] Oct. 1996	Leaf Texture[4] Nov. 1996	Red Thread[5] May to June 1996
21	Accent	5.8	6.1	5.6	4.5	6.0	6.7	6.8
22	MED 5071	5.8	6.2	5.5	3.8	6.3	5.7	7.0
23	Top Hat	5.8	5.9	5.7	5.2	6.0	7.0	5.7
24	MB 45	5.8	5.8	5.7	2.5	8.7	7.3	6.2
25	Omega III	5.7	6.0	5.4	4.7	7.0	6.3	6.2
26	Pick Lp 102-92	5.7	6.2	5.3	2.5	7.0	7.0	8.3
27	MB 43	5.7	5.9	5.6	2.8	7.3	6.3	6.5
28	Esquire	5.6	5.7	5.6	4.5	5.7	7.3	6.7
29	ISI-MHB	5.6	6.1	5.1	5.0	5.0	7.0	6.0
30	MB 46	5.6	5.9	5.3	2.3	9.0	6.7	4.8
31	APR 124	5.5	5.6	5.4	4.0	7.0	5.7	7.5
32	Precision	5.5	5.6	5.4	5.8	5.0	5.7	7.8
33	WX3-93	5.5	6.1	4.8	3.0	6.0	6.7	5.3
34	PST-2R3	5.5	6.3	4.7	3.8	5.7	6.0	4.8
35	Wind Star	5.5	5.8	5.2	5.2	5.7	6.7	5.2
36	ZPS-2NV	5.5	5.8	5.3	3.3	6.7	6.3	5.7
37	J-1703	5.4	5.6	5.2	4.3	5.7	5.7	7.2
38	Brightstar	5.4	6.0	4.8	3.8	6.0	6.0	5.0
39	Pick PR 84-91	5.4	5.8	4.9	2.0	5.3	6.3	5.7
40	Advantage	5.4	5.7	5.1	2.7	7.7	7.0	6.0

Table 1 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Spring Greenup[2] April 1996 Avg.	Color[3] Oct. 1996	Leaf Texture[4] Nov. 1996	Red Thread[5] May to June 1996
41	Omni	5.4	5.8	4.9	2.5	5.3	6.7	6.0
42	Night Hawk	5.4	5.6	5.3	3.5	5.7	5.7	6.3
43	MB 44	5.4	5.7	5.1	1.8	8.3	6.0	7.0
44	Stardance	5.3	5.5	5.1	5.0	7.3	5.3	6.8
45	Imagine	5.3	5.8	4.7	1.5	8.3	6.0	5.7
46	Excel	5.3	5.4	5.2	2.7	8.0	6.3	6.7
47	Palmer II	5.3	5.8	4.9	3.0	6.3	6.0	5.8
48	Yorktown III	5.3	5.5	5.2	5.8	5.0	6.3	6.5
49	Achiever	5.2	5.2	5.2	5.3	6.3	6.0	6.8
50	Edge	5.2	5.3	5.2	5.2	6.3	7.0	6.2
51	Saturn II	5.2	5.5	4.8	3.8	5.3	5.7	6.2
52	PSI-E-1	5.2	5.5	4.9	4.2	5.0	6.0	6.2
53	WVPB-93-KFK	5.2	5.3	5.2	4.3	4.3	6.7	7.0
54	Riviera II	5.2	5.4	5.0	4.3	5.7	6.0	6.0
55	Wizard	5.2	5.2	5.2	3.8	7.0	6.0	5.2
56	Vivid	5.1	5.4	4.7	4.5	6.0	5.7	6.7
57	Passport	5.1	5.3	4.8	3.2	7.0	6.0	5.7
58	Quickstart	5.1	5.2	5.0	5.7	6.0	6.7	5.2
59	Pick 928	5.1	5.4	4.7	3.3	5.3	6.0	5.2
60	Assure	5.1	5.4	4.8	4.7	5.0	5.3	6.0

Table 1 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Spring Greenup[2] April 1996 Avg.	Color[3] Oct. 1996	Leaf Texture[4] Nov. 1996	Red Thread[5] May to June 1996
61	Legacy II	5.1	5.5	4.7	2.3	8.7	7.0	4.8
62	Stallion Select	5.1	5.0	5.1	6.0	5.3	5.0	7.8
63	SR 4200	5.1	5.3	4.9	5.0	4.0	6.0	6.0
64	PST-2CB	5.1	5.8	4.5	6.3	5.3	4.3	6.0
65	Blackhawk	5.1	5.3	4.9	5.2	5.0	7.0	6.5
66	Repell II	5.1	5.3	4.9	4.3	5.7	6.0	5.5
67	Cutter	5.0	5.4	4.6	3.3	5.7	6.7	5.3
68	Roadrunner	5.0	5.2	4.8	3.3	7.7	6.7	4.3
69	MVF-4-1	5.0	5.4	4.5	5.0	5.0	6.0	6.2
70	Koos 93-6	5.0	5.4	4.7	5.5	5.3	5.7	6.3
71	CAS-LP23	5.0	5.4	4.6	2.0	7.3	6.0	5.3
72	Prelude II	5.0	5.4	4.8	4.3	6.3	4.7	5.3
73	WX3-91	4.9	5.2	4.7	5.5	6.0	5.3	7.5
74	PC-93-1	4.9	5.2	4.6	5.5	4.3	5.3	5.8
75	Koos 93-3	4.9	5.0	4.8	6.2	4.7	4.7	6.8
76	Nine-O-One	4.9	5.2	4.6	4.0	6.0	5.0	6.7
77	Advent	4.9	5.3	4.4	5.5	4.7	4.7	5.0
78	Dancer	4.8	5.0	4.5	4.0	3.7	6.0	5.0
79	BAR Er 5813	4.8	5.2	4.5	2.8	5.0	5.7	5.3
80	Navajo	4.8	5.3	4.4	1.8	4.3	5.3	5.8

Table 1 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Spring Greenup[2] April 1996 Avg.	Color[3] Oct. 1996	Leaf Texture[4] Nov. 1996	Red Thread[5] May to June 1996
81	ISI-R2	4.8	4.9	4.8	7.0	4.3	6.0	6.5
82	SRX 4010	4.8	5.2	4.5	4.5	4.3	5.7	6.2
83	PS-D-9	4.8	4.9	4.8	6.2	4.7	5.0	5.3
84	Morning Star	4.8	4.8	4.8	5.0	5.0	5.7	6.8
85	APR 106	4.7	4.7	4.7	5.2	4.0	4.7	5.8
86	APR 131	4.7	4.9	4.5	4.7	5.3	5.7	7.3
87	WVPB-PR-C-2	4.7	5.1	4.3	4.7	5.0	5.3	6.0
88	Express	4.6	4.6	4.6	5.7	4.3	6.0	6.8
89	SRX 4400	4.6	5.3	4.0	5.2	3.7	5.3	6.5
90	Pegasus	4.5	4.5	4.5	5.3	5.0	5.7	6.7
91	Nobility	4.5	4.9	4.2	4.8	3.7	4.7	6.7
92	WVPB 92-4	4.3	4.5	4.2	5.8	3.3	4.3	5.7
93	Saturn	4.3	4.4	4.2	5.3	4.3	5.0	6.5
94	Williamsburg	4.2	4.4	4.1	5.5	4.0	5.0	5.7
95	Prelude	4.2	4.3	4.2	6.0	4.3	5.0	6.0
96	Blazer II	4.0	4.1	4.0	4.8	3.7	4.7	5.8
97	Repell	4.0	4.3	3.8	5.7	3.3	3.3	5.7
98	APR 066	3.9	4.4	3.4	6.7	3.0	4.0	6.3
99	Fiesta II	3.9	4.0	3.9	5.7	4.3	4.3	6.5
100	DLP 1305	3.8	4.1	3.4	3.7	3.3	3.7	6.7

Table 1 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	Spring Greenup[2] April 1996 Avg.	Color[3] Oct. 1996	Leaf Texture[4] Nov. 1996	Red Thread[5] May to June 1996
101	Dasher II	3.8	4.2	3.5	6.3	3.0	4.0	6.5
102	Manhattan II	3.8	3.9	3.6	5.2	4.7	4.3	4.5
103	Mulligan	3.6	3.6	3.5	6.8	4.0	3.7	5.7
104	DSV NA 9401	3.2	3.4	3.0	5.7	2.0	3.0	5.5
105	DSV NA 9402	3.1	3.2	3.0	6.3	2.3	3.3	5.5
106	Figaro	3.0	3.3	2.7	6.3	2.0	3.3	4.7
107	Pennfine	2.9	3.2	2.6	7.7	2.3	2.7	8.0
108	Linn	1.6	1.7	1.4	8.8	1.3	1.0	5.8
	LSD at 5% =	0.6	0.7	0.8	1.3	1.5	1.5	2.1

[1] 9 = best turf quality
[2] 9 = earliest spring greenup
[3] 9 = darkest green color
[4] 9 = finest leaf texture
[5] 9 = least disease

Table 2. Performance of perennial ryegrass cultivars and selections in a turf trial seeded September 1994 at Adelphia, NJ. (Includes 1994 National Perennial Ryegrass Test - NTEP.)

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	*Poa annua*[2] Aug. 1996 (%)
1	Brightstar II	7.3	7.6	7.0	16.7
2	MB 46	6.5	7.0	6.0	23.3
3	MB 42	6.5	7.0	6.0	16.7
4	Premier II	6.5	6.9	6.0	15.0
5	Palmer III	6.4	7.1	5.7	11.7
6	MB 45	6.4	6.8	6.0	22.0
7	MB 47	6.2	6.8	5.7	15.0
8	MB 43	6.2	6.8	5.6	13.3
9	Brightstar	6.2	6.2	6.2	7.3
10	Calypso II	6.2	6.4	5.9	8.3
11	LRF-94-C8	6.1	6.6	5.7	21.7
12	LRF-94-B6	6.1	6.5	5.7	25.0
13	Excel	6.0	6.6	5.4	25.0
14	LRF-94-C7	6.0	6.5	5.5	18.3
15	Secretariat	6.0	6.3	5.7	10.7
16	Elf	6.0	6.5	5.5	11.7
17	Legacy II	6.0	6.5	5.5	16.7
18	PST-2DLM	5.9	6.4	5.4	20.0
19	Divine	5.9	6.3	5.5	18.3
20	Palmer II	5.8	6.2	5.5	16.7
21	MED 5071	5.8	5.8	5.8	11.7
22	Laredo	5.8	5.9	5.6	16.7
23	PST-2R3	5.8	6.0	5.6	11.7
24	Pick Lp 102-92	5.7	5.9	5.6	28.3
25	J-1706	5.7	5.9	5.4	9.0
26	Manhattan III	5.6	5.7	5.6	15.0
27	Panther	5.6	5.6	5.6	15.0
28	Wizard	5.6	5.9	5.3	16.7
29	Catalina	5.6	5.8	5.4	20.0
30	MB 44	5.6	5.7	5.4	23.3

Table 2 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	*Poa annua*[2] Aug. 1996 (%)
31	Imagine	5.5	5.8	5.3	26.7
32	Advantage	5.5	5.8	5.2	10.0
33	Citation III	5.5	5.7	5.2	23.3
34	Top Hat	5.5	5.6	5.3	8.3
35	WX3-93	5.5	5.7	5.3	15.0
36	Prizm	5.4	5.7	5.1	15.0
37	SR 4200	5.3	5.6	5.1	15.0
38	Stallion Select	5.3	5.2	5.4	20.0
39	Prelude II	5.3	5.1	5.4	20.0
40	Passport	5.3	5.3	5.2	15.0
41	Omni	5.2	5.6	4.8	16.7
42	ZPS-2NV	5.2	5.5	4.9	23.3
43	Roadrunner	5.2	5.4	5.0	18.3
44	Saturn II	5.2	5.6	4.7	20.0
45	Accent	5.2	5.1	5.2	13.3
46	Night Hawk	5.1	5.3	4.9	16.7
47	Repell II	5.1	5.0	5.2	21.7
48	ISI-MHB	5.0	5.1	5.0	10.0
49	Pick PR 84-91	5.0	5.2	4.8	15.0
50	Advent	5.0	4.9	5.0	20.0
51	Esquire	4.9	4.7	5.2	16.7
52	Pick 928	4.9	4.8	5.0	23.3
53	TMI-EXFLP94	4.9	4.9	4.9	18.3
54	Riviera II	4.9	4.9	4.8	18.3
55	Cutter	4.9	4.7	5.0	18.3
56	Stardance	4.8	5.0	4.6	25.0
57	Omega III	4.8	5.2	4.4	16.7
58	APR 106	4.8	4.6	5.0	13.3
59	Assure	4.8	4.4	5.2	18.3
60	Morning Star	4.8	4.6	4.9	21.7
61	J-1703	4.7	4.4	5.0	16.7
62	Quickstart	4.7	4.6	4.8	18.3
63	Precision	4.7	4.4	4.9	13.3
64	Pegasus	4.7	4.8	4.6	18.3
65	Koos 93-3	4.7	4.7	4.6	18.3

Table 2 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	*Poa annua*[2] Aug. 1996 (%)
66	WX3-91	4.7	4.4	4.9	15.0
67	Yorktown III	4.6	4.5	4.7	15.0
68	Navajo	4.6	4.7	4.6	15.0
69	WVPB-93-KFK	4.6	4.6	4.6	18.3
70	Windstar	4.6	4.6	4.7	16.7
71	Koos 93-6	4.6	4.6	4.6	23.3
72	PST-2CB	4.6	4.5	4.7	30.0
73	Achiever	4.6	4.9	4.3	15.0
74	Nine-O-One	4.5	4.4	4.6	25.0
75	Vivid	4.5	4.5	4.5	16.7
76	CAS-LP23	4.5	4.9	4.0	26.7
77	APR 124	4.5	4.3	4.6	15.0
78	MVF-4-1	4.4	4.4	4.5	16.7
79	Edge	4.4	4.2	4.5	20.0
80	BAR Er 5813	4.4	4.3	4.4	16.7
81	PSI-E-1	4.3	4.5	4.2	15.0
82	APR 131	4.3	4.0	4.5	15.0
83	ISI-R2	4.3	3.9	4.6	10.0
84	SRX 4400	4.3	4.3	4.2	15.0
85	PC-93-1	4.2	4.2	4.2	13.3
86	Blazer II	4.2	4.0	4.4	26.7
87	Saturn	4.2	4.1	4.3	23.3
88	Nobility	4.2	3.8	4.6	20.0
89	SRX 4010	4.2	4.1	4.2	21.7
90	Competitor	4.1	4.0	4.2	23.3
91	Dancer	4.1	4.2	3.9	16.7
92	PS-D-9	4.1	3.8	4.3	13.3
93	Fiesta II	4.0	4.0	4.0	20.0
94	Williamsburg	4.0	3.9	4.1	23.3
95	WVPB-PR-C-2	3.9	3.8	4.0	18.3
96	Dasher II	3.8	3.7	3.9	20.0
97	Repell	3.8	3.8	3.8	21.7
98	Prelude	3.8	3.7	3.9	21.7
99	WVPB 92-4	3.8	3.7	3.9	21.7
100	Gator E-	3.8	3.7	3.8	23.3

Table 2 (continued).

	Cultivar or Selection	Turf Quality[1] 1995-1996 Avg.	Turf Quality[1] 1995 Avg.	Turf Quality[1] 1996 Avg.	*Poa annua*[2] Aug. 1996 (%)
101	Express	3.8	3.6	3.9	18.3
102	Manhattan II	3.7	3.5	3.8	15.0
103	Gator E+	3.7	3.7	3.6	25.0
104	Pennant	3.7	3.2	4.1	25.0
105	APR 066	3.5	3.3	3.7	18.3
106	DLP 1305	3.5	3.4	3.5	33.3
107	DSV NA 9402	3.0	2.6	3.4	23.3
108	Figaro	3.0	2.6	3.4	21.7
109	Pennfine	2.7	2.5	2.9	38.3
110	DSV NA 9401	2.7	2.3	3.0	20.0
111	Linn	1.1	1.1	1.1	53.3
	LSD at 5% =	0.7	0.7	0.8	11.0

[1] 9 = best turf quality
[2] 9 = percent of plot covered by *Poa annua*

Table 3. Performance of perennial ryegrass cultivars and selections in a turf trial seeded August 1995 at Adelphia, NJ.

	Cultivar or Selection	Turf Quality[1] 1996 Avg.	Color[2] Oct. 1995
1	Affirmed	7.0	8.0
2	Palmer III	6.9	7.0
3	Secretariat	6.6	6.7
4	Calypso II	6.0	6.3
5	Legacy II	5.8	7.0
6	Elf	5.3	5.7
7	Advantage	5.3	6.0
8	Brightstar	5.2	5.3
9	Repell II	4.9	5.7
10	SR-4200	4.7	5.0
11	Prizm	4.7	5.0
12	Prelude II	4.4	5.3
13	Assure	4.4	5.3
14	Cutter	4.3	5.0
15	Edge	4.2	4.7
16	Blazer II	4.1	4.7
17	Advent	4.0	4.7
18	Fiesta II	4.0	5.0
19	Seville	3.9	3.7
20	Yorktown III	3.8	5.0
21	Chatham	3.7	4.0
22	Top Hat	3.5	4.0
23	Edge	3.5	4.3
24	Lowgrow	3.5	4.3
25	Dasher II	3.5	4.0
26	JD PR-7	3.4	4.7
27	Gettysburg	3.1	4.3
28	Duet	2.3	3.0
29	Pennfine	2.2	2.3
30	Linn	1.2	2.3
	LSD at 5% =	0.7	1.1

[1] 9 = best turf quality
[2] 9 = darkest green color

Table 4. Yearly nitrogen (N) applied and mowing height (Ht) on perennial ryegrass tests established at North Brunswick and Adelphia, NJ.

	1995		1996	
	N[1]	Ht[2]	N	Ht
Table 1 (Sept. 1994, North Brunswick)	5.9	1.5	4.3	1.5
Table 2 (Sept. 1994, Adelphia)	7.0	1.5	3.4	1.5
Table 3 (Aug. 1995, Adelphia)			5.0	1.5

[1] Annual N applied (lbs/1000 ft^2).
[2] Mowing height in inches.